



# White Paper

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Hewlett-Packard Company

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## Features of HP Gateway versus Novell Gateway

### *Abstract:*

The purpose of this paper is to identify the features that are supported by the HP IP/IPX NDPS Printer Gateway (HP Gateway) and the Novell Printer Gateway (Novell Gateway) and to describe how the Novell Gateway can be used to manage HP printers. This paper also identifies the procedural discrepancies between the HP Gateway and the Novell Gateway that occur when configuring and managing printer devices. The reader should have the knowledge of the HP Gateway and Novell Netware operating system; familiarity with Novell iPrint/iManager in NetWare version 6.0 and 6.5 is helpful.

Software versions in comparison

<b>HP Gateway:</b>	<b>3.00b</b>
<b>Novell Gateway:</b>	<b>2.02</b>
<b>Novell Port Handler:</b>	<b>2.01</b>
<b>NDPS Manager:</b>	<b>3.01b</b>
<b>Novell NetWare:</b>	<b>6.5 with service pack 1</b>
<b>Novell iPrint under iManager:</b>	<b>2.0.2</b>



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## Notice

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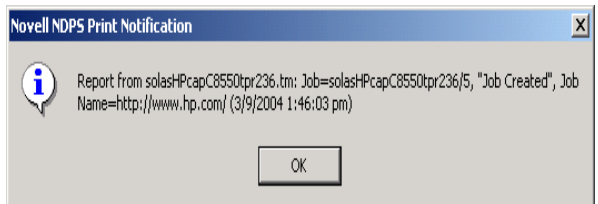
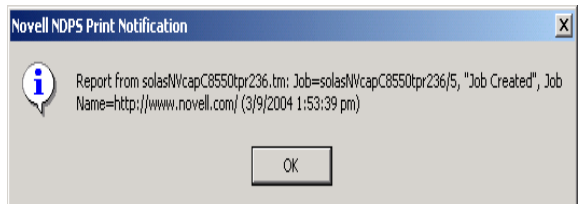
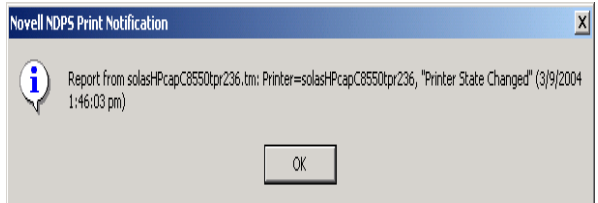
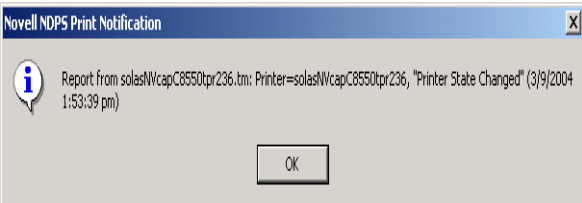
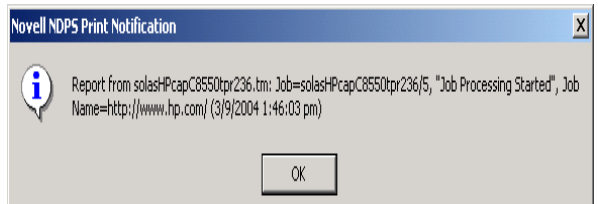
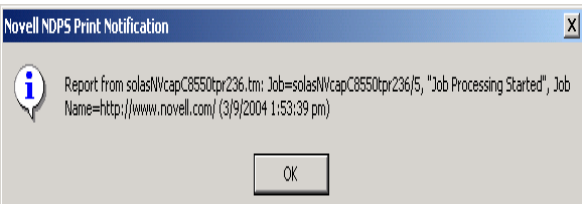
## Printer Gateway Features

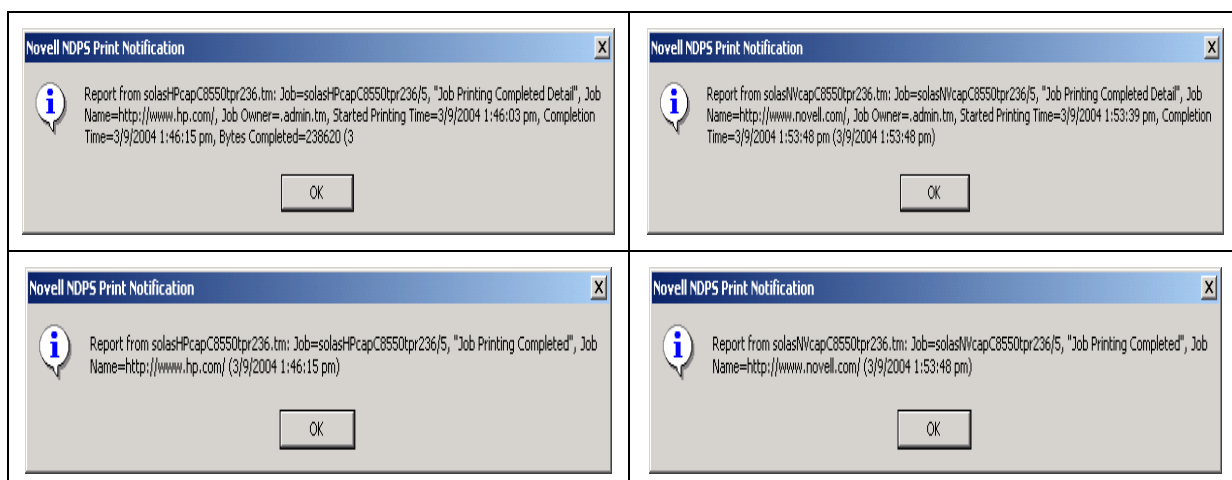
### IPX Protocol

HP Gateway supports printing through IPX protocol. Because some customers still use the HP Gateway to print through IPX protocol, dropping IPX support could affect a number of customers. Novell is shifting support from IPX to IP protocol. It would benefit customers to migrate to the IP protocol in order to take advantage of future Novell developments.

### Job Monitoring

HP Gateway's job monitoring feature provides true end-of-job feedback when the last page of a document is printed. Job monitoring in HP Gateway version 3.00b is turned off by default because there are intermittent problems when it is enabled, especially when working with older HP printer models. Even though job monitoring exists in HP Gateway prior to version 3.x, this feature has not been actively promoted. Therefore, most customers are not aware of this feature. There is no significant difference in terms of job and printer status notifications between the HP Gateway and the Novell Gateway because both of them make use of SNMP. The following example illustrates the job status and printer status notifications that are provided by both Gateways.

HP Gateway Job and Printer Notifications	Novell Gateway Job and Printer Notifications
 <p>Report from solasHPcapC8550tpr236.tn: Job=solasHPcapC8550tpr236/5, "Job Created", Job Name=http://www.hp.com/ (3/9/2004 1:46:03 pm)</p> <p>OK</p>	 <p>Report from solasNWcapC8550tpr236.tn: Job=solasNWcapC8550tpr236/5, "Job Created", Job Name=http://www.novell.com/ (3/9/2004 1:53:39 pm)</p> <p>OK</p>
 <p>Report from solasHPcapC8550tpr236.tn: Printer=solasHPcapC8550tpr236, "Printer State Changed" (3/9/2004 1:46:03 pm)</p> <p>OK</p>	 <p>Report from solasNWcapC8550tpr236.tn: Printer=solasNWcapC8550tpr236, "Printer State Changed" (3/9/2004 1:53:39 pm)</p> <p>OK</p>
 <p>Report from solasHPcapC8550tpr236.tn: Job=solasHPcapC8550tpr236/5, "Job Processing Started", Job Name=http://www.hp.com/ (3/9/2004 1:46:03 pm)</p> <p>OK</p>	 <p>Report from solasNWcapC8550tpr236.tn: Job=solasNWcapC8550tpr236/5, "Job Processing Started", Job Name=http://www.novell.com/ (3/9/2004 1:53:39 pm)</p> <p>OK</p>



## Printer Discovery

The HP Gateway has a unique feature that can discover HP JetDirect network attached printers and configure them as public access printers automatically. The Novell Gateway requires that administrators know the IP address or host name of the printer prior to configuring it. However, in most cases, this may not be relevant as administrators do not routinely add public access printers everyday.

## Reporting Printer Features

Information about individual printer features can be retrieved in NWAdmin through the Gateways' snap-ins. Although the snap-in for the HP Gateway reports more information than the Novell Gateway snap-in, the extra information is helpful, but not critical. The following table shows the feature list for both Gateways after configuring an HP Laserjet 8150 printer.

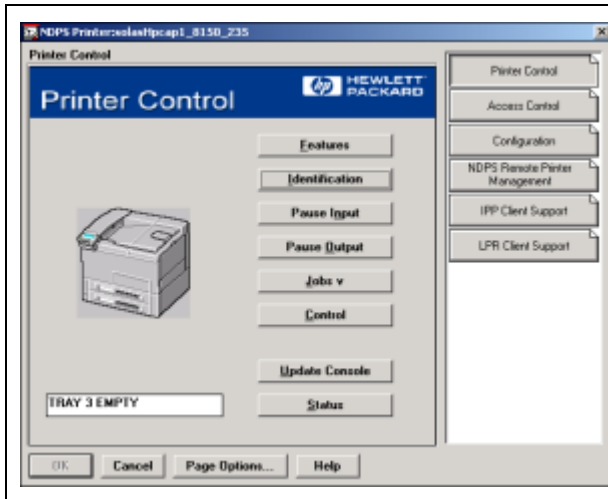
**Table-1**

<b>HP Gateway</b>	<b>Novell Gateway</b>
<b>Features</b>	<b>Features</b>
<i>Document Formats Supported</i>	<i>Document Formats Supported</i>
<i>Automatic</i>	
<i>PCL</i>	
<i>PCLXL</i>	
<i>PJL</i>	
<i>PostScript</i>	<i>PostScript</i>
<i>Duplex: Yes</i>	<i>Duplex: Yes</i>
<i>Maximum Resolution(dpi): 600</i>	<i>Maximum Resolution(dpi): 600</i>
<i>Mechanism: Laser</i>	<i>Mechanism: Laser</i>
<i>Maximum Speed: 1920</i>	<i>Maximum Speed: 1920</i>
<i>Memory (KB): 32768</i>	<i>Memory (KB): Not Available</i>
<b>Advanced Features:</b>	<b>Advanced Features:</b>

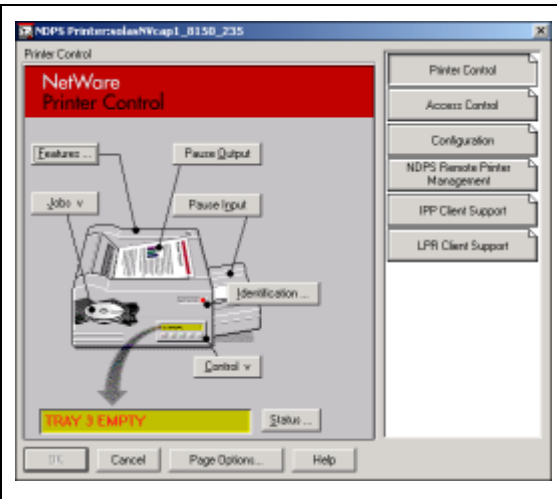
<i>Last Job Completion Time</i>	<i>Last Job Completion Time</i>
<i>Last Job Number</i>	<i>Last Job Number</i>
<i>Configuration Changes</i>	
<i>Printer Locations</i>	
<i>Printer Model</i>	<i>Printer Model</i>
<i>Printer Manufacturer</i>	<i>Printer Manufacturer</i>
<i>Localization Country</i>	
<i>Localization Language</i>	
<i>Channel Interface Index</i>	
<i>Channel Default Page Description Language Index</i>	
<i>Channel Current Job Control Language Index</i>	
<i>Channel Protocol Job Control Language Index</i>	
<i>Channel Protocol Version</i>	
<i>Console Number of Display Characters</i>	
<i>Console Number of Display Line</i>	
<i>Console Localization</i>	
<i>Media Path Default Index</i>	
<i>Marker Default Index</i>	
<i>Output Default Index</i>	
<i>Input Default Index</i>	
<i>General Service Person</i>	
<i>General Current Operator</i>	
<i>Current Localization</i>	
<i>Printer Device Id</i>	<i>Printer Device Id</i>
<i>Printer Startup Time</i>	<i>Printer Startup Time</i>
<i>Printer State</i>	<i>Printer State</i>
<i>Previous Printer State</i>	<i>Previous Printer State</i>
<i>Port Handler Executable and Parameters</i>	<i>Port Handler Executable and Parameters</i>
<i>PDS Executable and Parameters</i>	<i>PDS Executable and Parameters</i>
<i>Printer State Severity</i>	<i>Printer State Severity</i>
<i>Printer Enabled</i>	<i>Printer Enabled</i>

The following diagrams show the HP Gateway and Novell Gateway user interface snap-ins. The HP Gateway snap-in has an **Update Console** button that is not present in the Novell Gateway snap-in.

**HP Gateway snap-in**

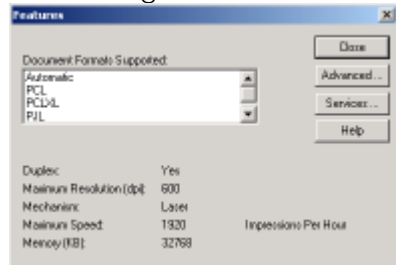


**Novell Gateway snap-in**

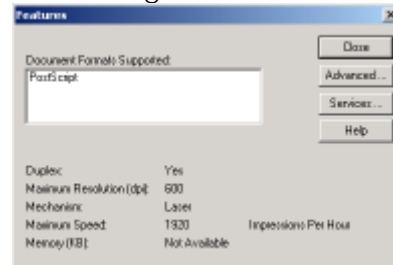


\*\*\* See Table-1 for a complete list of features.

**HP Gateway**  
(after clicking the **Features** button)



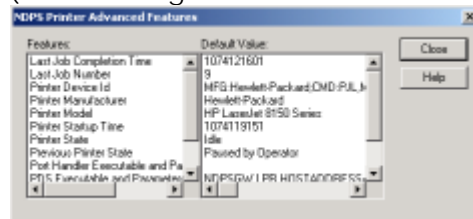
**Novell Gateway**  
(after clicking the **Features** button)



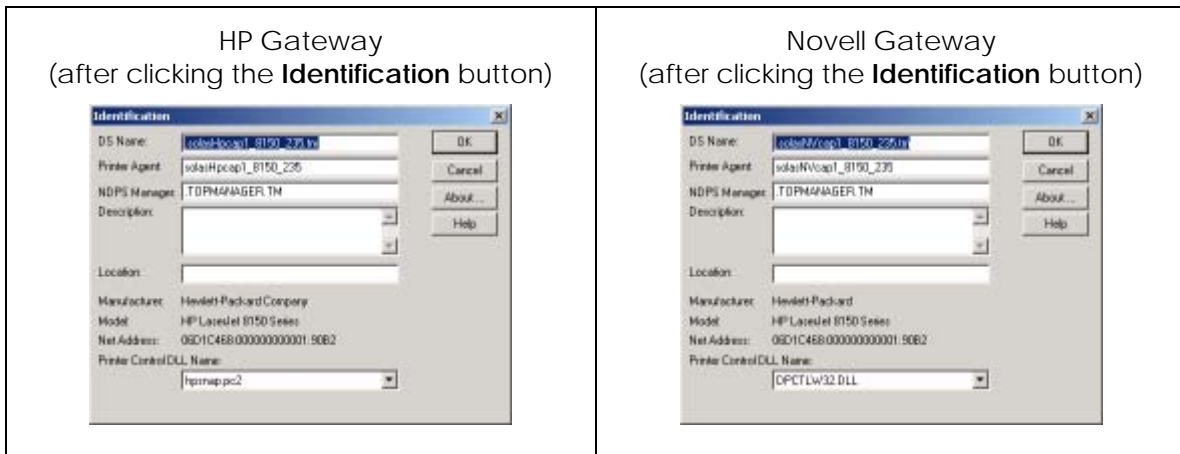
(after clicking the **Advanced** button)



(after clicking the **Advanced** button)



Both HP and Novell Gateway snap-ins present identical information except the value of the **Printer ControlDLL Name**.



### Grouping of HP Gateway Printer Agents

HP Gateway has its own unique user interface through the console and the snap-in. All printer agents created under HP Gateway are managed under the HP Gateway console. For Novell Gateway, all printer agents are managed under the NDPS Manager console. With Novell NetWare 6.0 and 6.5, all printer agents can be managed through iPrint, a web interface. However, there is no grouping of printer agents whether the printer agents are created under HP Gateway or not. In general, if customers are using HP Gateway, they must use HP printers or HP JetDirect print servers. Customers that only use HP Gateway will typically experience a learning curve when using the Novell iPrint web interface to manage HP devices. This learning curve is generally related to differences in the “look-and-feel” in the user interfaces.

The following screen shows the printer agents that are created with the HP Gateway when viewing through the HP Gateway console.

Hewlett-Packard NDPS Gateway v3.00b (20)

NetWare Loadable Module

HP Gateway Printer Statistics

Jobs Opened	0	Docs Opened	0
Jobs Closed	0	Docs Closed	0
Requests	16	Requests Failed	0
Requests Processed	15	Bytes Sent To Printer	0x0

Printer Gateways

:16.74.64.212:9100 <--->	SOLASHPCAP1_9K_212
:16.74.61.84:9100 <   >	SOLASHPCAP8150TPR84
:16.74.60.236:9100 <--->	SOLASHPCAPC8550TPR236
:16.74.61.84:9100 <   >	SOLASHPPAP8150TPR84

The statistics above are relative to the highlighted HP Gateway.

Enter=Edit

ESC=Return

DEL=Shutdown

F4=Change Sort Order

F8=More

The following screen shows all printer agents that are created with the HP Gateway and Novell Gateway when viewing through the NDPS Manager.

NDPS Manager v3.01b

NetWare Loadable Module

NDPS Manager: .TOPMANAGER.TM

Printer Agent List

solashHPcap1_9k_212	Idle
solashHPcap8150tpr84	Needs Attention
solashHPcapC8550tpr236	Idle
solashHPcap8150tpr84	Needs Attention
solashNUcap1_9k_212	Idle
solashNUcap8150tpr84	Needs Attention
solashNUcapC8550pc205	Idle
solashNUcapC8550tpr236	Idle

Select the Printer Agent you want to access.

Enter=Select item    Del=Delete marked    Ins=Create new

F8=More



The following screen shows all printer agents presented in iPrint. There are two printer agents created under HP Gateway and two printer agents created under Novell Gateway.

NDPS Manager '.TOPMANAGER.TM' - Microsoft Internet Explorer provided by Hewlett-Packard

File Edit View Favorites Tools Help

Address <https://someNovellServer:8009/PsmStatus> Go Links »

NDPS Manager '.TOPMANAGER.TM'

Begin Refresh Page Refresh Rate 5 seconds

Number of Printer Agents 4

Printer Agent Name	Current Status	Jobs		Jobs Printed Since			Printer Pool Name
		Scheduled	Active	3-09-04 1:15 pm	3-08-04 11:59 pm	3-02-04 4:59 pm	
<a href="#">solasHPcap1_9k_212</a>	Idle	0	0	0	0	0	
<a href="#">solasHPcapC8550tpr236</a>	Idle	0	0	0	2	2	
<a href="#">solasNVcapC8550pc205</a>	Idle	0	0	0	0	0	
<a href="#">solasNVcapC8550tpr236</a>	Idle	0	0	0	1	1	

Jobs		Jobs Printed Since		
Scheduled	Active	3-09-04 1:15 pm	3-08-04 11:59 pm	3-02-04 4:59 pm
0	0	3	3	3

Current NDPS Manager Status **GOOD**

Advanced NDPS Manager Information

Internet

## Multi-port JetDirect Support

The Novell Gateway also supports external multi-port JetDirect devices. Both Novell Gateway snap-in and iPrint have an option for the user to specify an external JetDirect device port number. The port numbers can be specified in the **Printer Name** field as follows:

- raw1 for parallel port 1
- raw2 for parallel port 2
- raw3 for parallel port 3

The following images show how to create a controlled access printer agent for an HP external JetDirect 500x print server that has a printer connected to the print server's parallel port 3:

### NWAdmin snap-in for HP Gateway

1. Enter a printer agent name in the **NDPS Printer Name**.

**Create NDPS Printer**

NDPS Printer Name:  Create Cancel Help

Printer Agent Source

☒ Create a New Printer Agent

☐ Existing NDPS Printer Object in NDS

☐ Public Access Printer

After Creating the NDPS Printer Object

☐ Define Additional Properties

☐ Create Another NDPS Printer

### NWAdmin snap-in for Novell Gateway

1. Enter a printer agent name in the **NDPS Printer Name**.

**Create NDPS Printer**

NDPS Printer Name:  Create Cancel Help

Printer Agent Source

☒ Create a New Printer Agent

☐ Existing NDPS Printer Object in NDS

☐ Public Access Printer

After Creating the NDPS Printer Object

☐ Define Additional Properties

☐ Create Another NDPS Printer

2. Enter a NDPS Manager and select **HP IP/IPX Printer Gateway**.

**Create Printer Agent**

Printer Agent (PA) Name:  OK Cancel Help

NDPS Manager Name:  ...

Gateway Types:

- Axis Gateway Configuration
- HP IP/IPX Printer Gateway**
- Minolta-QMS Gateway Configuration
- Novell Printer Gateway (SNMP)
- Xerox Printer Gateway (IP/IPX)

2. Enter a NDPS Manager and select **Novell Printer Gateway (SNMP)**.

**Create Printer Agent**

Printer Agent (PA) Name:  OK Cancel Help

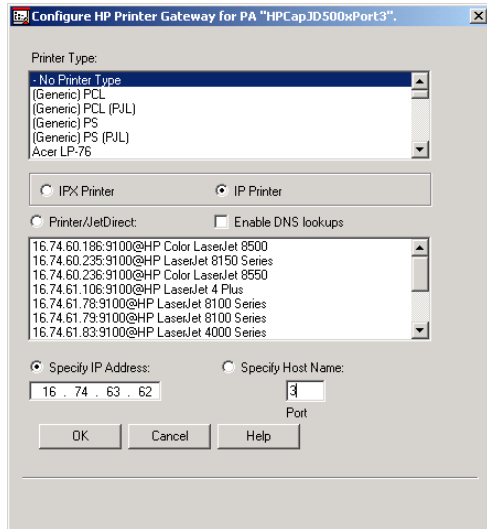
NDPS Manager Name:  ...

Gateway Types:

- Axis Gateway Configuration
- HP IP/IPX Printer Gateway
- Minolta-QMS Gateway Configuration
- Novell Printer Gateway (SNMP)**
- Xerox Printer Gateway (IP/IPX)

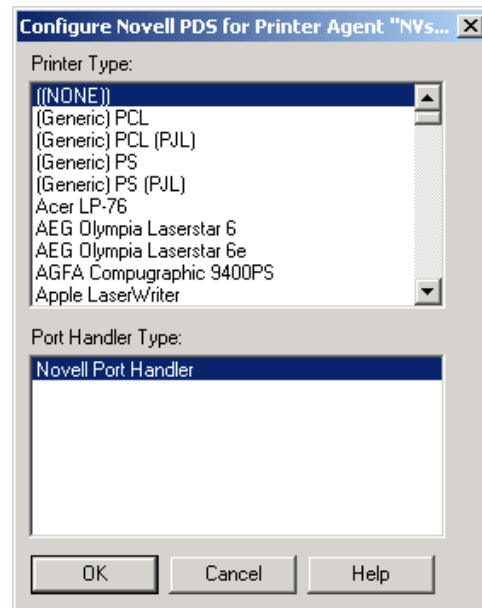
NWAdmin snap-in for HP Gateway

3. The following information is presented. A list of available JetDirect devices if **Printer/JetDirect** has been selected. Enable DNS lookups. A port can be specified. In this case, enter 3 for parallel port 3.

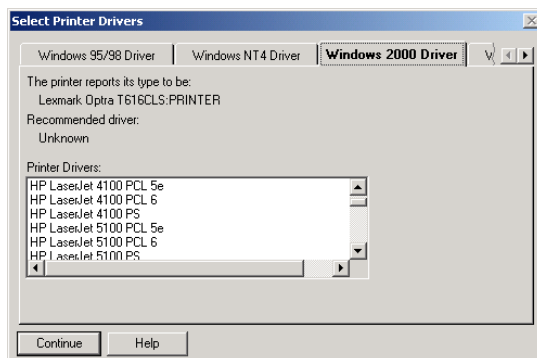


NWAdmin snap-in for Novell Gateway

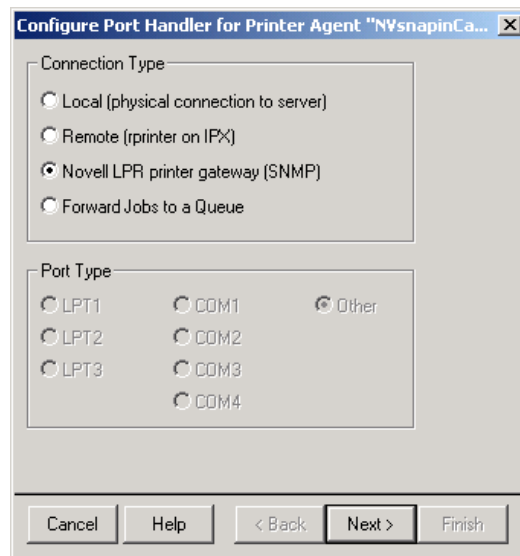
3. Select **NONE** and **Novell Port Handler**.

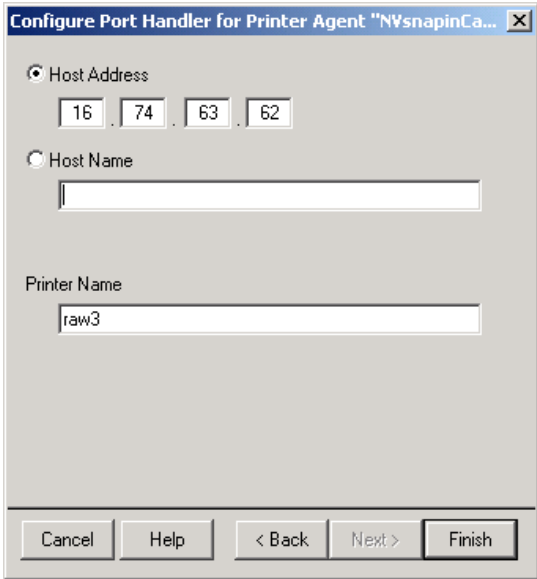
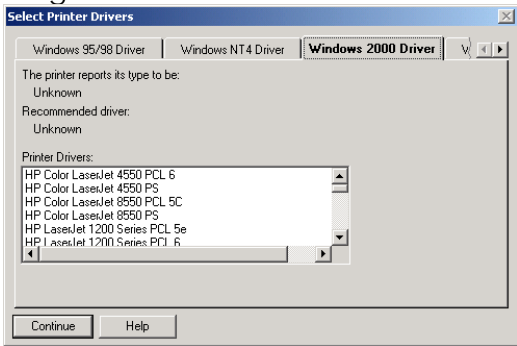


4. Select the appropriate drivers. Click **Continue** and the printer agent will be created.



4. Select **Novell LPR printer gateway (SNMP)**.

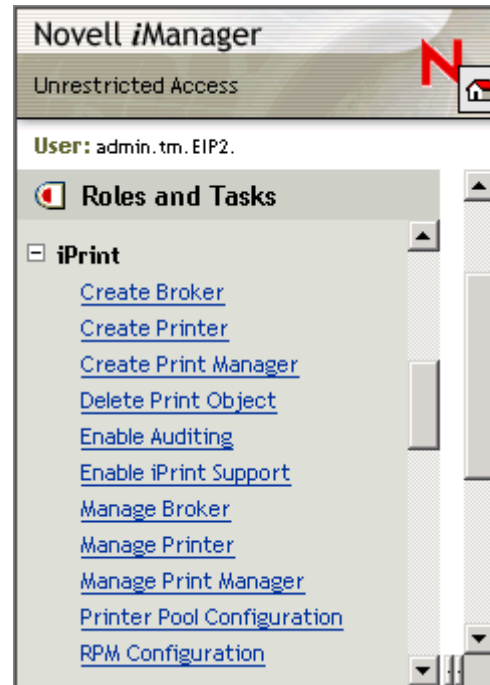


<p>Refer to step 3 for the equivalent procedural information for HP Gateway</p>	<p>5. Enter the IP address or host name. Enter raw3 for parallel port 3 in <b>Printer Name</b> and click <b>Finish</b>.</p> 
<p>Refer to step 4 for the equivalent procedural information for HP Gateway</p>	<p>6. Select the appropriate drivers. Click <b>Continue</b> and the printer agent will be created.</p> 

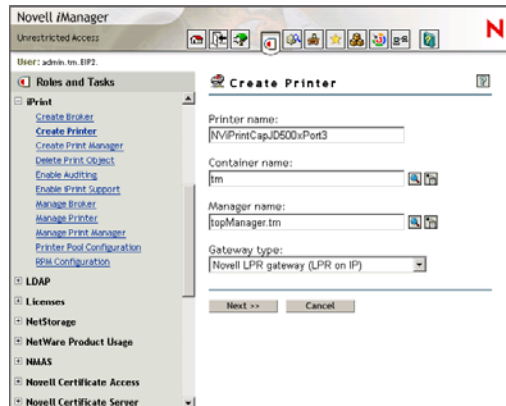
## Create a Printer Agent Using iPrint

No equivalent UI for HP Gateway

1. Bring up iManager and then click on iPrint.

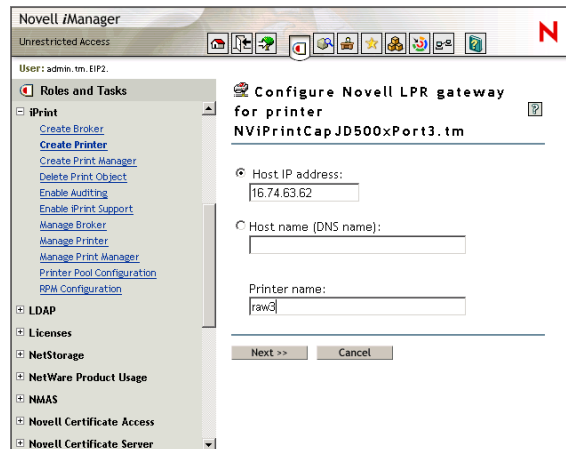


2. Click on **Create Printer** and enter the appropriate information.

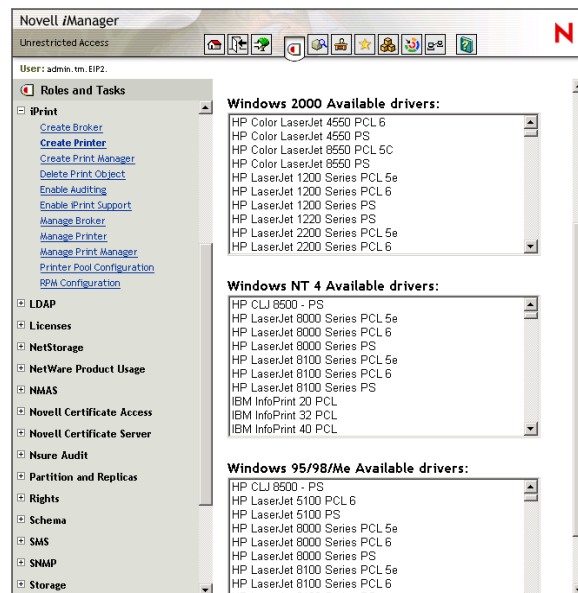


No equivalent UI for HP Gateway

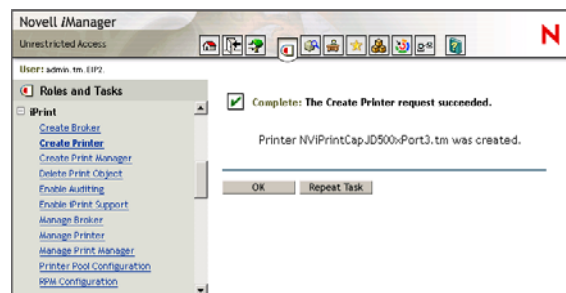
3. Enter the IP address or host name of the HP external JetDirect device. Enter raw3 for parallel port 3 in **Printer name**.



4. Select the appropriate drivers and click **Next**.



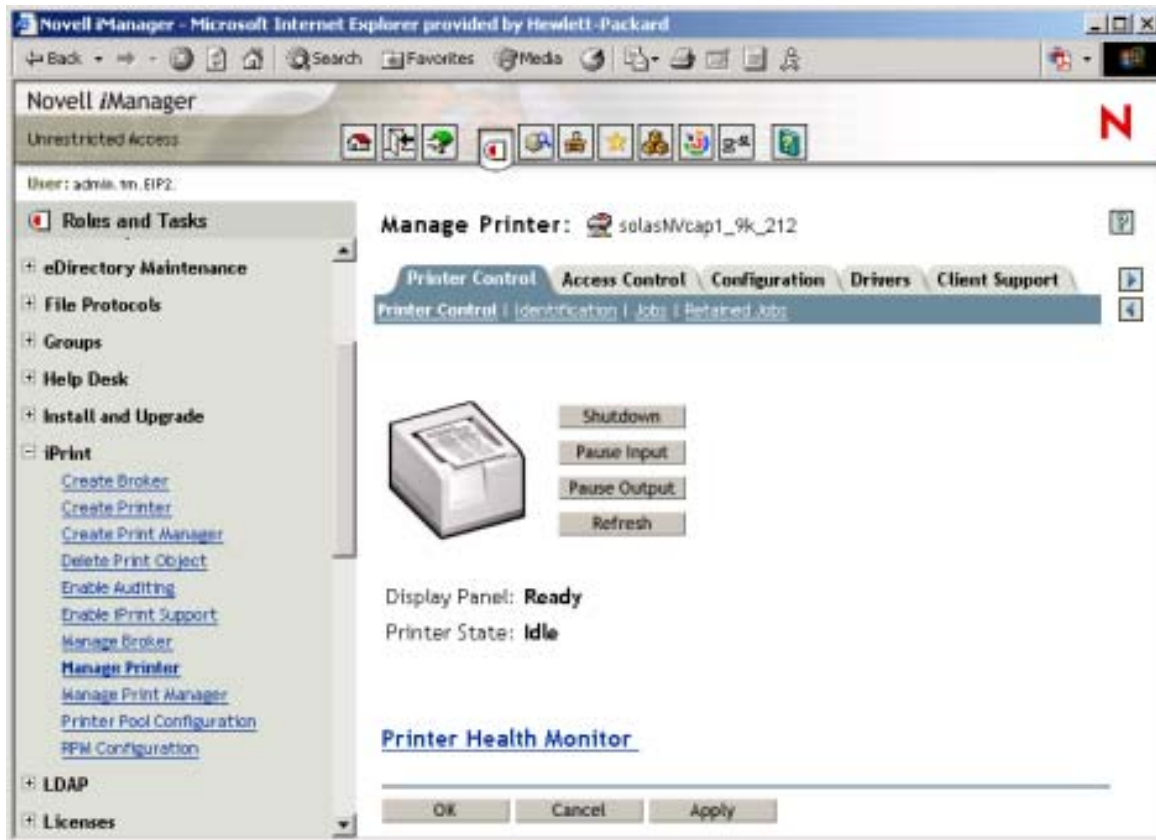
5. Printer agent is being created.



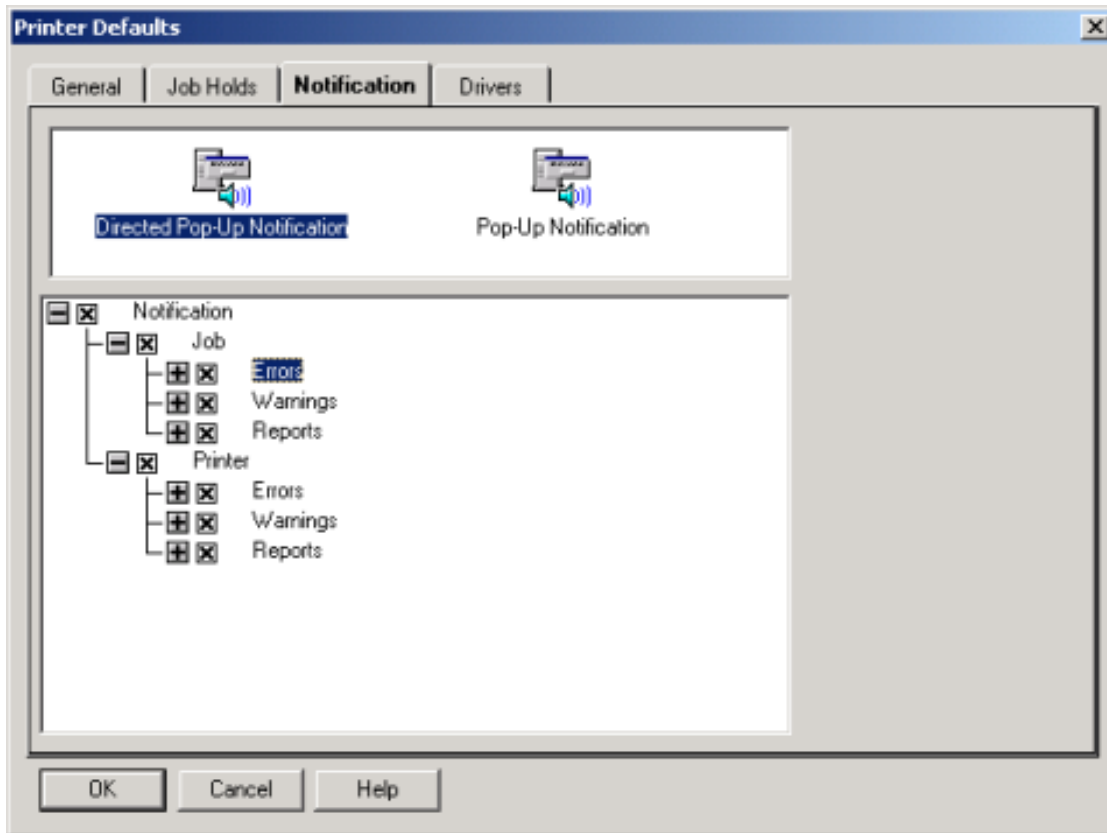
## Job and Printer Notification Configuration

Job and printer notifications can be configured through the HP Gateway snap-in and the Novell Gateway snap-in. However, there is no **Job** and **Printer Notification** under **Configuration** in iPrint. Novell has targeted the addition of this feature to iPrint in the near future.

The Novell Gateway has no job and printer notification selection in iPrint.



The job and printer notifications can be configured through the snap-ins.



## Summary

Despite the differences between the HP Gateway and the Novell Gateway as well as the unsupported features, it is possible to start managing all HP printers under the Novell Gateway. With Novell iPrint under the iManager in Novell NetWare 6.0 and 6.5, customers can conveniently manage their printers with no need to install any additional client software. It is recommended that all printer agents created under the HP Gateway be migrated to the Novell Gateway. For information about migrating printer agents to Novell Gateway, please refer to the [Novell documentation TID-2968782](#).